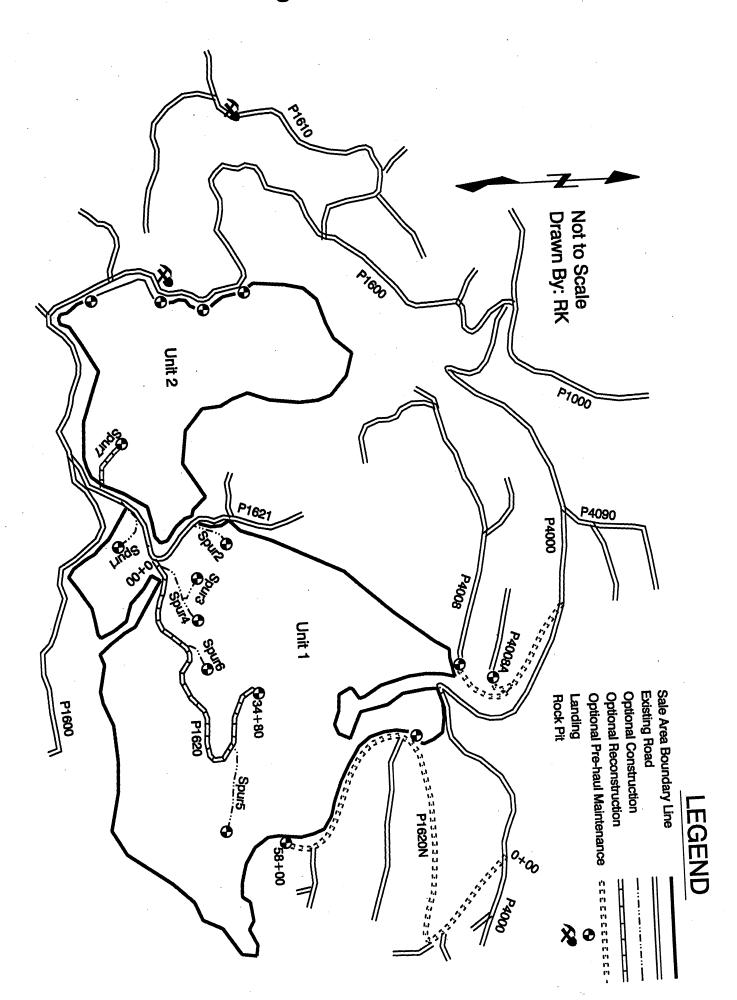
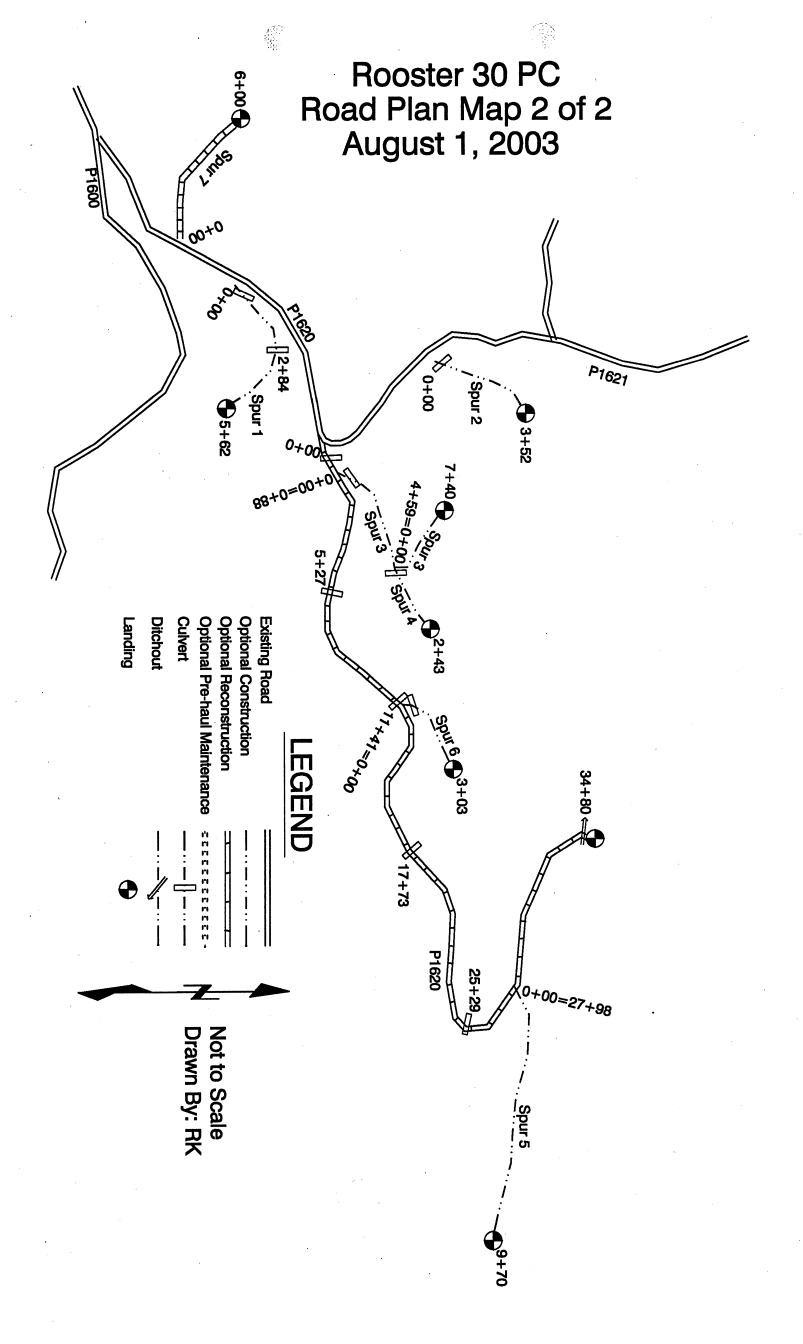
Rooster 30 PC Road Plan Map 1 of 2 August 1, 2003





ROAD PLAN

SALE NAME: Rooster 30 PC

ROAD PLAN DATE: August 1, 2003

SCOPE OF PROJECT

This project includes, but is not limited to new construction including: clearing, grubbing, right-of-way debris disposal, excavation and/or embankment to subgrade, landing construction, acquisition and installation of drainage structures, and hauling and application of rock.

This project also includes, but is not limited to reconstruction including:

Road Stations & Requirements

P1620 0+00 - 34+80

Reconstruct road prism to the specifications shown on the Typical Section Sheet, install culverts as listed on the Culvert List, apply rock as listed on the

Rock List.

Spur 7 0+00 - 6+00

Reconstruct road prism to the specifications shown on the Typical Section

Sheet, apply rock as listed on the Rock List.

This project also includes, but is not limited to pre-haul maintenance including:

Road Stations & Requirements

P4008 0+00 – 18+00

Brush right-of-way, clean ditches, clean all culvert inlets and outlets, grade and

shape running surface.

P1620N 0+00 - 58+00

Brush right-of-way, clean ditches, clean all culvert inlets and outlets, grade and

shape running surface.

P4008A 0+00 - 4+34

Brush right-of-way, clean ditches, grade and shape running surface.

This project also includes, but is not limited to road deactivation as described in Section 9.

SECTION 1 - GENERAL CLAUSES

1.1-1

Clauses in this plan apply to all construction or reconstruction or pre-haul maintenance including landings unless otherwise noted.

1.1-3

Construction or reconstruction or pre-haul maintenance of the following road/s is not required. If the Purchaser elects to use any of these roads, they shall be constructed or reconstructed on the State's location and in accordance with this Road Plan.

Road	<u>Length</u>	Type
P4008	18.00 stations	Pre-haul Maintenance
P1620N	58.00 stations	Pre-haul Maintenance
P1620	34.80 stations	Reconstruction
Spur 1	5.62 stations	Construction
Spur 2	3.52 stations	Construction
Spur 3	7.40 stations	Construction
Spur 4	2.43 stations	Construction
Spur 5	9.70 stations	Construction
Spur 6	3.03 stations	Construction
Spur 7	6.00 stations	Reconstruction
P4008A	4.34 stations	Pre-haul Maintenance

ROAD PLAN

SALE NAME: Rooster 30 PC

ROAD PLAN DATE: August 1, 2003

1.1-4

Any departure from this Road Plan including relocation, extension, change in design or additional roads shall be submitted, in writing, to the Contract Administrator for consideration. Submitted plans must be approved before construction begins.

1.1-5

On this plan quantities are minimum acceptable values. Additional quantities required by the State because of hidden conditions or Purchaser's choice of construction season or techniques shall be at the Purchaser's expense. Hidden conditions include, but are not limited to, solid subsurface rock, subsurface springs or saturated ground, and unstable soil.

1.2-1

Construction and/or reconstruction and/or pre-haul maintenance shall not be permitted from November 1 to April 30 unless authority to do so is granted, in writing, by the Contract Administrator.

1.2.1-1

Pioneering shall not extend past construction that will be completed during the current construction season. Drainage shall be provided on all uncompleted construction as approved, in writing, by the Contract Administrator.

Clearing and grubbing shall be completed prior to starting excavation and embankment.

Culvert placement in live streams shall precede embankment where culverts are to be placed along natural ground. Temporary diversion culverts shall be provided when designed culverts are elevated above natural ground within embankments.

Culverts shall be installed in completed subgrade as construction progresses.

Subgrade, ditches and culvert installation shall be completed and are subject to written approval by the Contract Administrator prior to rock application.

1.2-2

Purchaser shall not use roads constructed or reconstructed or pre-haul maintained under this Road Plan for hauling, other than timber cut on the right of way, without written approval from the Contract Administrator.

1.2-3

All roads shall be constructed using track mounted hydraulic excavators unless otherwise authorized, in writing, by the Contract Administrator.

1.3-1

Rock hauling shall not be permitted from November 1 to April 30 unless authorized, in writing, by the Contract Administrator.

1.3-2

Snowplowing shall not be permitted unless authorized, in writing, by the Contract Administrator.

SECTION 2 - CLEARING

2.1-1

Fell all vegetative material larger than 6 inches dbh or over 20 feet high between the marked right-ofway boundaries and within waste areas or if not marked in the field, between clearing limits specified on Typical Section Sheet.

2.1-3

Right-of-way timber shall not be decked within the grubbing limits or in locations that interfere with the construction of the road prism, as defined by the Contract Administrator. Right-of-way timber shall not be decked in locations that impede drainage.

2.1-9

Right-of-way brushing shall consist of removing all vegetation greater than 1 inch in diameter growing within 5 feet of the edge of the running surface.

ROAD PLAN

SALE NAME: Rooster 30 PC

ROAD PLAN DATE: August 1, 2003

SECTION 3 - GRUBBING

3-1

All stumps shall be removed that fall between grubbing limits shown on the Typical Section Sheet. Those with undercut roots shall be removed.

3-2

Grubbing limits are defined as the entire area between external limits shown on the Typical Section Sheet.

SECTION 4 - DEBRIS DISPOSAL AND REMOVAL

4.1-1

Right-of-way debris is defined as all vegetative material larger than one cubic foot in volume, within the clearing limits.

4.1-2

All right-of-way debris disposal shall be completed prior to application of rock.

4.2.3-3

Right-of-way debris shall not be placed against standing timber.

4.2.3-4

Right of way debris shall be scattered outside the grubbing limits.

SECTION 5 - EXCAVATION

5.1-1

Unless controlled by construction stakes or specific design sheets herein, roads shall be constructed in accordance with dimensions shown on the Typical Section Sheet.

5.1-3

The construction of road grade and alignment shall conform to the State's marked location. The reconstruction of existing road grades shall conform to the original location except as directed by the contract administrator. Grade and alignment shall have smooth continuity, without abrupt changes in direction.

5.1-4

Extra widening on the inside of curves shall be:

2 feet extra --- 80 to 100 foot radius curves 4 feet extra --- 60 to 80 foot radius curves

5.1-5

Curve widening where required, shall be added to the inside of curves.

5.1-8

Excavation slopes shall be constructed no steeper than shown on the following table (except as construction staked or designed):

Material Type	Excavation Slope Ratio
Common Earth (on side slopes to 55%)	1:1
Common Earth (55% to 70% sideslopes)	3/4:1
Common Earth (on slopes over 70%)	1/2:1
Fractured or loose rock	
Hardpan or solid rock	1/4:1

5.1-9

Excavation and embankment slopes shall be constructed to a uniform line and left rough for easier revegetation.

ROAD PLAN

SALE NAME: Rooster 30 PC

ROAD PLAN DATE: August 1, 2003

5.1-10

Embankments shall be widened as follows:

Height at Shoulder

Subgrade Widening

Less than 6 feet 6 feet or over 2 feet

5.1-11

Embankment slopes shall be constructed no steeper than shown on the following table:

Material Type	Embankment slope ratio
Common earth and rounded gravel	1-1/2:1
Angular rock	
Sandy Soils	

5.1-12

Organic material shall be excluded from embankment shown on Typical Section Sheet and from waste material deposited on slopes in excess of 40 percent.

5.1-15

Waste material may be deposited adjacent to the road prism on side slopes up to 55 % if the material is compacted and more than 100 feet away from live streams. On side slopes of 55% or more, all excavation shall be end hauled or pushed to designated embankment sites. All waste embankments shall be compacted in horizontal layers not exceeding 2 feet.

5.1-21

Waste material shall not be deposited within 100 feet of a live stream, wetland, or wetland management zone.

5.1-24

Turnouts shall be intervisible with a maximum of 1,000 feet between turnouts unless shown otherwise on drawings.

5 2-1

Pioneering operations shall not undercut the final cut slope, deposit excavated material outside the right-of-way limits or restrict drainage.

5.3-1

All embankment and waste material shall be compacted. The minimum acceptable compaction is achieved by placing embankments in 2 foot or shallower lifts and routing excavation equipment over the entire width of the lifts. Side hill embankments too narrow to accommodate excavation equipment may be placed by end-dumping or side casting until sufficiently wide to support the equipment.

5.4-1

Silt-bearing runoff, as defined by the Contract Administrator, shall not be permitted to go into streams.

5.4-2

Accomplish sediment removal through silt traps, silt fences, settling ponds or other methods to be approved, in writing, by the Contract Administrator.

5.5-5

Finished subgrade shall be crowned as shown on the Typical Section Sheet. Grade and compact to a uniform, firm, rut-free surface to ensure surface runoff in an even unconcentrated manner.

ROAD PLAN

SALE NAME: Rooster 30 PC

ROAD PLAN DATE: August 1, 2003

SECTION 6 - DRAINAGE

621-1

Purchaser shall furnish, install and maintain corrugated polyethylene and/or galvanized steel pipe as designated on Culvert List. Culvert and flume lengths shall be varied to fit as built conditions subject to written approval by the Contract Administrator.

Note: all culverts installed as part of this sale shall be removed at the end of the sale and remain the property of the Purchaser.

6221-1

Culvert, downspout, flume and energy dissipator installation shall be in accordance with Culvert and Drainage Specification Detail.

6.2.2.3-1

Cross drains and surface culverts on road grades in excess of 3% shall be skewed at least 30 degrees from perpendicular to the road centerline.

6.2.2.3-2

Cross drain culverts shall be installed at a slope steeper than the incoming ditch grade, but not less than 3 percent nor more than 10 percent.

6.2.2.5-1

Drainage structure outfalls shall not terminate directly on unprotected soil that will erode. Downspouts, flumes and energy dissipators shall be installed to prevent erosion.

6.3-1

Ditches shall be constructed prior to application of rock. Ditches shall drain to culverts, ditchouts and natural drainages.

6.3-2

Shaping the ditchline, culvert headwalls and catchbasins shall be completed prior to application of rock and shall be done in accordance with the Typical Section Sheet and Drainage Specification Detail.

6.4-1

Catch basins shall be constructed to resist erosion. Minimum dimensions: two feet wide and four feet long with backslopes consistent with Clause 5.1-8: Excavation Slopes.

6.5-1

Head walls shall be constructed in accordance with Culvert and Drainage Specification Detail at all cross-drain culverts.

6.5-2

Embankment slopes adjacent to culvert inlets and outlets shall be armored for a distance of two culvert diameters on each side of the pipe and one culvert diameter above the pipe in accordance with Culvert List.

SECTION 7 - ROCK

7.1-1

Rock used under this contract may be obtained from the following pits on State land:

Source # / Name	Location	Rock Type
1 / P1600 Pit	T31N, R13W	Pit run
2 / P1600 Pit	T31N, R13W	Rip-rap
3 / P1610 Pit	T31N, R13W	Pit run
4 / P1610 Pit	T31N, R13W	Rip-rap

7.1-5

Use of all rock sources are subject to written approval from the Contract Administrator.

ROAD PLAN

SALE NAME: Rooster 30 PC

ROAD PLAN DATE: August 1, 2003

7.2-1

All pit operations shall be done according to the attached Pit Plans.

7.2.1-1

Ballast rock shall meet the following specifications for gradation when placed on the subgrade. No more than 10% of the rock shall be larger than 8 inches in any dimension and no rock shall be larger that 12 inches in any dimension.

7.2.4-1

Rock drilling and shooting shall meet the following specifications:

- a. Over size material produced and remaining in the pit at the conclusion of the timber sale shall not exceed 15 percent of the total pit volume mined for this sale.
- b. Oversize material is defined as rock fragments too large to be converted by the purchaser to a size that will meet specifications used for the roads in this sale.
- 7.4.2-1

Apply at least the minimum required rock quantity as shown on the Rock List.

7 4 2-2

Subgrade shall be approved, in writing, by the Contract Administrator prior to application of rock.

7.4.2-7

Turnouts and curve widening shall have rock applied to the same depth and specifications as the traveled way.

7.4.2-8

Each lift of rock shall be shaped as shown on the Rock List and shall be uniform, firm, rut-free and shaped to ensure surface runoff in an even unconcentrated manner.

7.4.3-3

Rock shall be spread, shaped and compacted concurrently with rock hauling operations.

SECTION 9 - ROAD DEACTIVATION

9.1-1

The roads listed below shall be closed by the purchaser within 60 days following completion of timber harvest. Deactivation shall consist of removing all culverts, constructing non-drivable waterbars at a spacing no greater than 100' and constructing tanks traps at the P1600/P1620 junction and at the P1620N/P4000 junction.

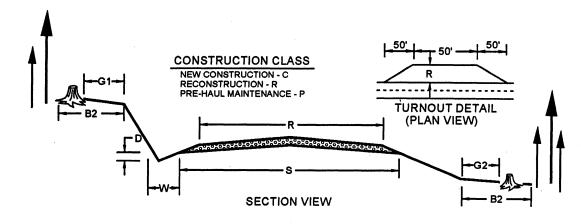
Road	Station
P-1620	0+00 - 34+80
Spur 1	0+00 - 5+62
Spur 2	0+00 - 3+52
Spur 3	0+00 - 7+40
Spur 4	0+00 - 2+43
Spur 5	0+00 - 9+70
Spur 6	0+00 - 3+03
Spur 7	0+00 - 6+00
P1620N	0+00 - 58+00
P4008A	0+00 - 4+34

ROAD PLAN

SALE NAME: Rooster 30 PC

ROAD PLAN DATE: August 1, 2003

TYPICAL SECTION SHEET

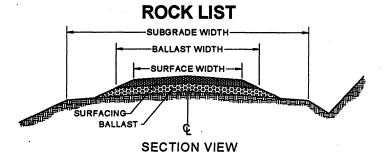


	END STATION	CONSTRUCTION CLASS			ROAD WIDTH (R)	CROWN " AT CL	рітсн Міртн (W)	рітсн рертн (D)	GRUBBING CUT BANK (G1)	GRUBBING FILL TOE (G2)	ROAD CUT CLEARING (B1)	ROAD FILL CLEARING (B2)	
		P R			12'	4	3'	1'	3'	3'	5'	<i></i>	
		P			12	4	3	1.	3	3	5	5'	
Spur 1 0+00 56		급			10'	4	3'	1'	3'	3'	5'	5'	
		$\frac{c}{c}$			10'	4	3'	1'	3'	3'	5'	5'	
Spur 3 0+00 7+		$\frac{c}{c}$			10'	4	3'	11	3'	3'	5'	5'	
Spur 4 0+00 2+		$\frac{c}{c}$			10'	4	3'	1'	3'	3'	5'	5'	
Spur 5 0+00 2+	70 (허			10'	4	3'	1'	3'	3'	5'	5'	
		č †	-		10'	4	3'	1'	3'	3'	5'	5'	
		Ř	-		10'	4	3'	11	3'	3'	5'	5'	
P4008A 0+00 4+		P			10	4	-			-	-	3	\vdash
1 1000	57 '	-	-										
		\dashv	$\neg \vdash$	-									
		\dashv	-										
		-											
		十				\neg							
<u> </u>		一十			_	_							
		一十	\dashv										
		\dashv		-	-			_					
		\dashv	\dashv	_									
		+	\dashv	ᅥ									
		一十:								_			
		十			一十								
		\neg		$\neg \dagger$		-			_				
· · · · · · · · · · · · · · · · · · ·		十	\dashv		一十								
		十	一十	$\neg \dagger$			-						

ROAD PLAN

SALE NAME: Rooster 30 PC

ROAD PLAN DATE: August 1, 2003



- Rock quantities, subtotals and totals are "truck measure" estimates. Rock shall be applied to at least the depths listed. Depths are compacted depths.
- 2.
- Rock slopes shall be 1½ (H): 1 (V). All rock sources are subject to approval by the Contract Administrator. 3.
- Source 1= P1600 pit run, Source 2= P1600 rip-rap, Source 3= P1610 pit run Source 4= P1610 rip-rap

ROAD NAME	START STATION	END STATION	SUBGRADE WIDTH (ft)	BALL'AST SOURCE	BALLAST WIDTH (ft)	BALLAST DEPTH (in)	BALLAST QUANTITY (cu.yd./sta)	BALLAST SUBTOTAL (cu.yd)	SURFACE SOURCE	SURFACE WIDTH (ft)	SURFACE DEPTH (in)	SURFACE QUANTITY (cu.yd./sta)	SURFACE SUBTOTAL (cu.yd)
P1620	0+00	34+80	15	1or3	12	12	70	2436					
SPUR 1	0+00	5+62	13	1or3	10	12	60	337					·
SPUR 2	0+00	3+52	13	1or3	10	12	60	211					
SPUR 3	0+00	7+40	13	1or3	10	12	60	444					
SPUR 4	0+00	2+43	13	1or3	10	12	60	146					
SPUR 5	0+00	9+70	13	1or3	10	12	60_	582					
SPUR 6	0+00	3+03	13	1or3	10	12	60	212					
SPUR 7	0+00	6+00	12	1or3	10	6	30	180					
LANDINGS & TURNOUT	S			1or3				1000					
RIP RAP FOR PIPES			-	2or4				6					
	-												
·													
	·												
BALLAST TOTAL = 5554 SURFACE TOTAL = 0													

ROAD PLAN

SALE NAME: Rooster 30 PC

ROAD PLAN DATE: August 1, 2003

CULVERT LIST

				<u> </u>					
ROAD NAME	STATION	CULVERT DIAMETER (in)	CULVERT LENGTH (ft)	FLUME LENGTH (ft)	DOWNSPOUT LENGTH (ft)	RIP RAP- INLET (cy)	RIP RAP - OUTLET (cy)	BACKFILL MATERIAL	NOTES
P1620	0+00	18	30				1/2		
	5+27	18	30				1/2		
	11+41	18	30				1/2		
	17+73	18	30				1/2		
	25+29	18	30				1/2		
Spur 1	0+00	18	30				1/2		
	2+84	18	30				1/2		
Spur 2	0+00	18	30				1/2		
Spur 3	0+00	18	24				1/2		·
Spur 4	0+00	18	24				1/2		
Spur 6	0+00	18	24				1/2		
								·	
									
,									

All rip rap shall be 8" – 12" quarry spalls unless specified otherwise. All backfill shall be native material unless specified otherwise.

Required Minimum Gauge for Metal Pipe

<u>Diameter</u>	Gaug			
18"	16			
24" - 42"	14			

ROAD PLAN

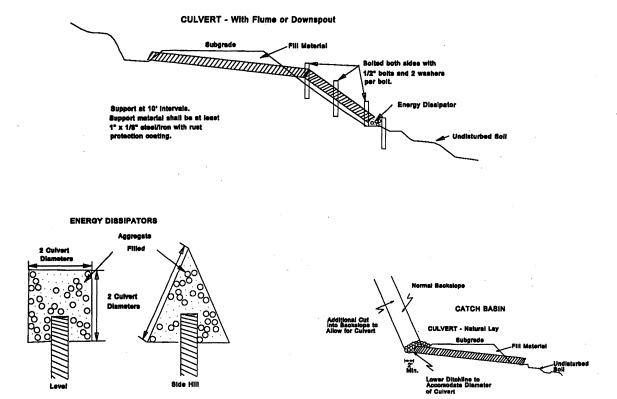
SALE NAME: Rooster 30 PC

ROAD PLAN DATE: August 1, 2003

CULVERT AND DRAINAGE SPECIFICATION DETAIL

INSTALLATION REQUIREMENTS:

- 1. Proper preparation of foundation and placement of bedding material shall precede the installation of all culvert pipe. This includes necessary leveling of the native trench bottom and compaction of required bedding material to form a uniform dense unyielding base. The backfill material shall be placed so that the pipe is uniformly supported along the barrel.
- 2. All bedding material of poor or non-uniform bearing capacity shall be removed and replaced with suitable fill. Crushed stone, gravel or compacted soil backfill material shall be used as the bedding and envelope material around the culvert. The aggregate size shall not exceed 1/6 pipe diameter or 4", whichever is smaller. All material shall be compacted in six inch layers under the haunches, around the sides and above the pipe to the minimum height of cover.
- 3. Crushed stone and gravel backfill materials shall be compacted to a level of 90-95% AASHTO standard density. When native soils are used as backfill material, a compaction level of 85% is required. This minimum compaction can be achieved by either hand or mechanical tamping.



DISSIPATOR SPECIFICATIONS:

Depth: 1 culvert diameter Aggregate: 6" plus

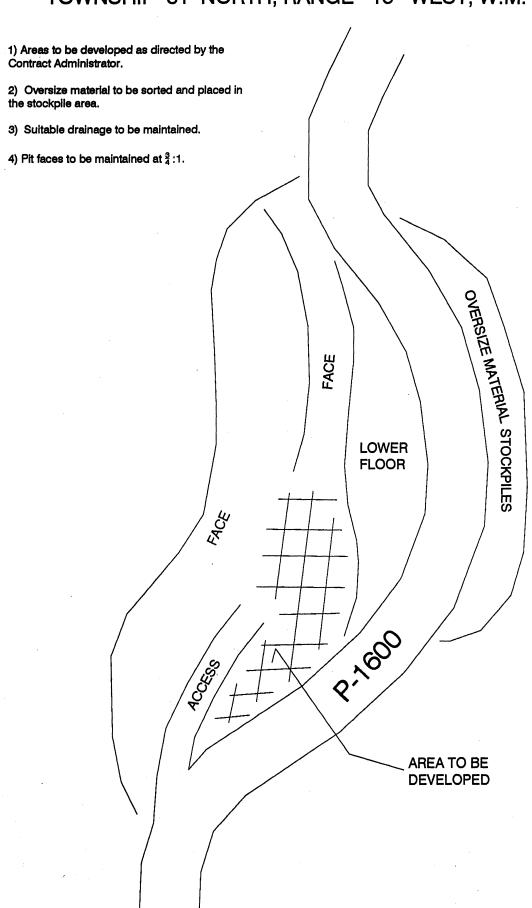
ROAD PLAN

SALE NAME: Rooster 30 PC

ROAD PLAN DATE: August 1, 2003

P-1600 PIT PLAN

TOWNSHIP 31 NORTH, RANGE 13 WEST, W.M.



ROAD PLAN

SALE NAME: Rooster 30 PC

ROAD PLAN DATE: August 1, 2003

P-1610 PIT PLAN

TOWNSHIP 31 NORTH, RANGE 13 WEST, W.M.

- 1) Areas to be developed as directed by the Contract Adminstrator.
- 2) Pit shall not be enlarged beyond it's existing boundaries or excavated below the elevation of the bottom of the existing hole on the east side of the P1610.
- 3) Pit removals shall be accomplished in the following order.
- i) removal of the rock knobs to the west of the P1610
- ii) expansion of the hole to the east of the P1610
- iii) excavation of P1610 and remaining pit area.
- 4) Suitable drainage to be maintained.
- 5) Road grade of the P1610 shall not exceed 12% in any direction.
- 6) Waste material shall be placed in locations directed by the Contract Administrator and in locations that will not interfere with future development and reclamation.

Purchaser shall attempt to use higher quality rock removed on the P1620 and lesser quality rock on Spurs 1-7.

